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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

VILLECCO, JOHN M

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 01/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/362,995

Applicant(s)

CANINI, FEDERICO

Examiner

John M. Villecco

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9, 18 and 19 is/are allowed.
- 6) ☐ Claim(s) 1, 5, 6, 8, 10, 14, 15 and 17 is/are rejected.
- 7) ☒ Claim(s) 2-4, 7, 11-13 and 16 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION II

Response to Arguments

1. This action is non-final due to the new grounds of rejection which was not based on an amendment. Applicant has proven their claim for foreign priority, thereby obviating the rejection from the previous action.
2. Applicant has amended claims 1, 10, 18, and 19 to overcome the 112, 2nd paragraph rejection presented in the previous office action.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1, 5-6, 10, and 14-15 are rejected under 35 U.S.C. 102(e) as being anticipated by Suzuki et al. (U.S. Publ. No. 2001/0013903).**

5. Regarding *claim 1*, Suzuki discloses a method of setting the exposure time of the sensor to a value defined between a minimum value and a maximum value with M prefixed values. In this case the minimum value is zero and the maximum is 255 (see paragraph 0042). The image sensor (31) captures another image and the level of luminosity is analyzed again. When the analyzed level of luminosity is higher than a global threshold level, the exposure time is varied

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and the process is iteratively repeated until the optimal exposure is found. In this case the optimal exposure is interpreted to be the global threshold level. See paragraphs 0034-0049 and Figures 3a-3c.

6. As for *claim 5*, Suzuki discloses that the method involves adjusting the amount of exposure time in order to acquire the subsequent image. See paragraphs 0034-0049.

7. With regard to *claim 6*, Suzuki discloses that the amount of exposure time can be greater than the time previously set.

8. Regarding *claim 10*, Suzuki discloses a method of setting the exposure time of the sensor to a value defined between a minimum value and a maximum value with M prefixed values. In this case the minimum value is zero and the maximum is 255 (see paragraph 0042). The image sensor (31) captures another image and the level of luminosity is analyzed again. When the analyzed level of luminosity is lower than a global threshold level, the exposure time is varied and the process is iteratively repeated until the optimal exposure is found. In this case the optimal exposure is interpreted to be the global threshold level. See paragraphs 0034-0049 and Figures 3a-3c.

9. As for *claim 14*, Suzuki discloses that the method involves adjusting the amount of exposure time in order to acquire the subsequent image. See paragraphs 0034-0049.

10. With regard to *claim 15*, Suzuki discloses that the amount of exposure time can be smaller than the time previously set.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 8 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Publ. No. 2001/0013903) in view of Suzuki et al. (U.S. Patent No. 5,751,354).**

13. Regarding claim 8, as mentioned above in the discussion of claim 1, Suzuki '903 discloses all of the limitations of the parent claim. However, Suzuki '903 fails to explicitly state that the analysis of the image is performed on a limited portion of the image. Suzuki '354, on the other hand, discloses that it is well known in the art to perform exposure adjustment using only a portion of the image signal. As discussed in column 26, lines 26-57 and shown in Figures 12A and 12B, the image sensor uses only portion of the image signal to obtain a signal LO for correcting the exposure. By using only a portion of the image signal the exposure calculations can be performed faster. Therefore, it would have been obvious to one of ordinary skill in the art to use only a portion of the image signal to perform the exposure calculations of Suzuki '903 so that the operation is sped up.

14. Claim 17 is considered substantively similar to claims 8. Please see the discussion of claim 8 above.

Allowable Subject Matter

15. **Claims 2-4, 7, 11-13, and 16 are objected to** as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

16. The following is a statement of reasons for the indication of allowable subject matter:

Regarding ***claim 2***, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest decreasing the exposure time of the sensor and iteratively repeating the previous steps until an optimum exposure is found when, alternatively: the value of the exposure time set is the minimum of the range of prefixed values, or the value of the set exposure time is such that the image presents a level of luminosity smaller than the global threshold level.

As for ***claims 4 and 13***, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest that the step of analyzing includes generating the luminosity of each pixel and determining if each pixel is greater (or smaller) than the global threshold value representative of overexposure (or underexposure), if a positive result is return, accumulating the contribution of the current pixel and iteratively repeating the previous steps, and if a negative result is returned, releasing the current pixel and repeating the steps, and finally, verifying if the sum of the contributions is greater than the global threshold value.

With regard to ***claim 7 and 16***, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest that the method includes defining a second range of values within the first range of values that is close to the optimum exposure time previously and found repeating the steps to find a new optimum exposure.

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Regarding *claim 11*, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest decreasing the exposure time of the sensor and iteratively repeating the previous steps until an optimum exposure is found when, alternatively: the value of the exposure time set is the minimum of the range of prefixed values, or the value of the set exposure time is such that the image presents a level of luminosity greater than the global threshold level.

17. Claims 9, 18, and 19 are allowed.

18. The following is an examiner's statement of reasons for allowance:

Regarding *claim 9*, the primary reason for allowance is that the prior art fails to teach or reasonably suggest setting the exposure value between two extremes in a first range, comparing the level of luminosity with a global threshold representative of a condition of the image where one of the extremes has been exceeded, and varying the exposure time and iteratively repeating the previous steps until an optimum exposure time equal to an exposure time closest to the exceeded extreme is found without exceeding the global threshold level.

Regarding *claim 18*, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest that the step of analyzing includes generating the luminosity of each pixel and determining if each pixel is greater than the global threshold value representative of overexposure; if a positive result is return, accumulating the contribution of the current pixel and iteratively repeating the previous steps, and if a negative result is returned, releasing the current pixel and repeating the steps, and finally, verifying if the sum of the contributions is greater than the global threshold value.

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As for *claim 19*, the primary reason for indication of allowable subject matter is that the prior art fails to teach or reasonably suggest that the step of analyzing includes generating the luminosity of each pixel and determining if each pixel is smaller than the global threshold value representative of underexposure, if a positive result is return, accumulating the contribution of the current pixel and iteratively repeating the previous steps, and if a negative result is returned, releasing the current pixel and repeating the steps, and finally, verifying if the sum of the contributions is greater than the global threshold value.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306 (For either formal or informal communications intended for entry. For informal or draft communications, please label "**PROPOSED**" or "**DRAFT**")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington VA, Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John M. Villecco whose telephone number is (703) 305-1460.

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The examiner can normally be reached on Monday through Thursday from 7:00 am to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber, can be reached on (703) 305-4929. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service desk whose telephone number is (703) 306-0377.

JMV
12/22/03


VU LE
PRIMARY EXAMINER